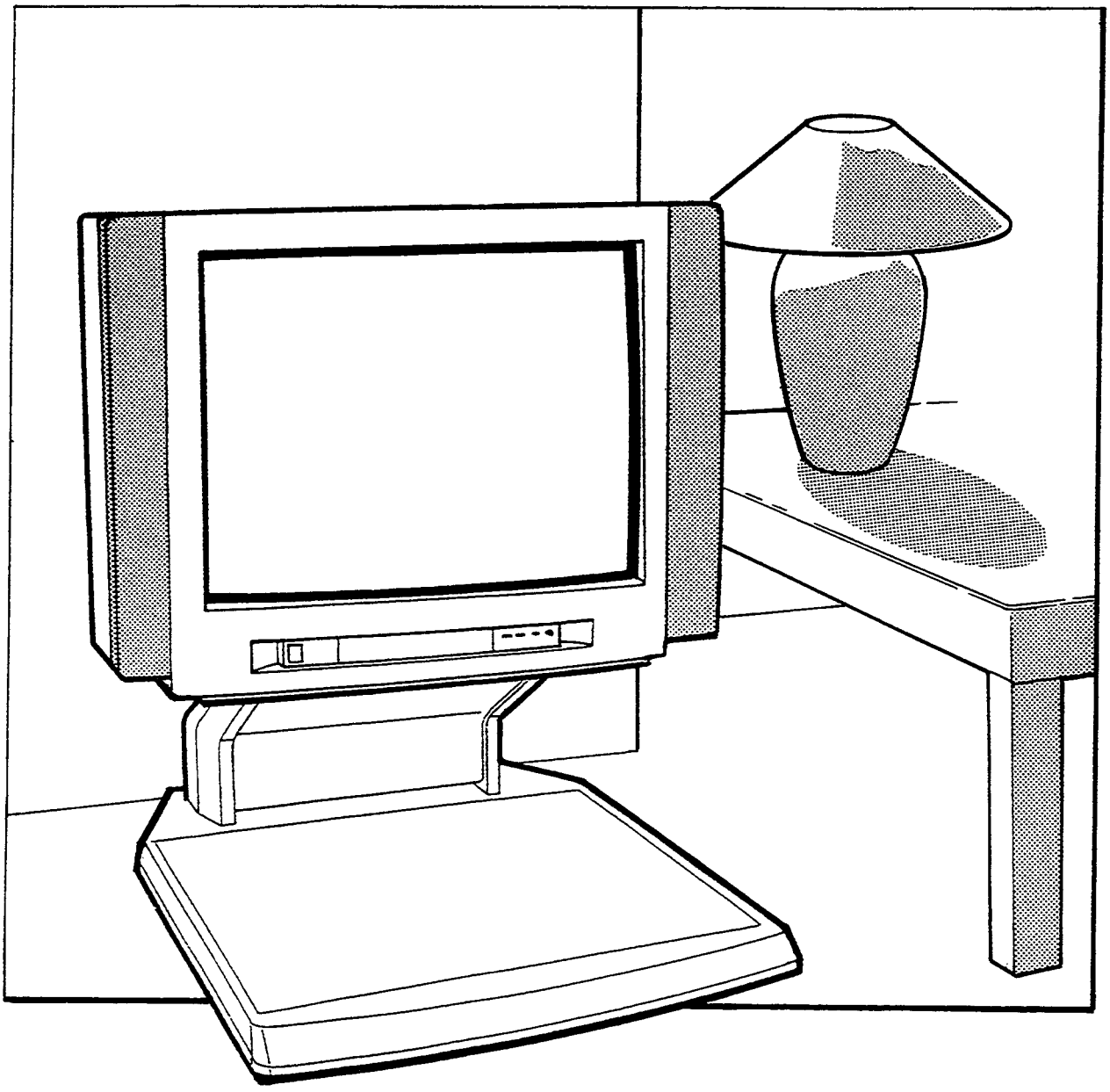
HITACHI

OPUS

NICAM DIGITAL STEREO TELEVISION

Operating Guide
for Model
C2164TN



beautifully sculptured sound & vision

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INTRODUCTION AND MAINS PLUG NOTES

Dear Hitachi Customer,

Congratulations on your purchase of this high quality Hitachi television. We at Hitachi, have made every effort to ensure that you, the customer, will be completely satisfied with all the features provided with this product.

Before Operating Your Television

Mains Supply:
This television is designed to operate on 240V AC 50Hz only. Do not operate on DC power supplies or other voltages. Before connecting this television to the mains, please read the following instructions carefully.

The mains lead on this receiver may already be fitted with a moulded plug incorporating a fuse, the value of which is indicated on the pin face of the plug.

Should the fuse need to be replaced, an ASTA or BSI approved BS 1362 fuse must be used of the same rating, marked thus or .

If the fuse cover is detachable, always replace the cover after replacing the fuse.

NEVER use the plug with the cover omitted.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home, or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead, or consult your dealer.

If there is no alternative to cutting off the mains plug, ensure that you dispose of it immediately, having first removed the fuse, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If the receiver is not supplied fitted with a mains plug, then follow the instructions given below.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:
BLUE LEAD ..... NEUTRAL BROWN LEAD ..... LIVE.

As the colours of the wires in the mains lead of this apparatus may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:- The BLUE coloured lead must be connected to the terminal marked with the letter N or coloured BLACK. The BROWN coloured lead must be connected to the terminal marked with the letter L or coloured RED.

On no account connect either of these leads to the terminal marked E or ⏚ or coloured GREEN.

The appliance must be protected by a 5 Amp fuse in the plug or adaptor, or at the distribution board.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

MAIN FEATURES

* NICAM DIGITAL STEREO SOUND

* MENU DRIVEN REMOTE CONTROL
  On Screen Displays for Most Functions

* TELETEXT WITH FASTEXT

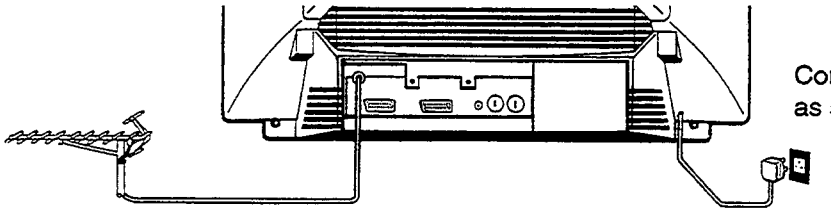
* EXTERNAL AUDIO/VIDEO SOCKETS
  Two Scart Sockets At Rear of TV
  An S-VHS socket and Phono Socket Inputs at the front

* DIGITAL AUDIO SOCKET
  To Output TV Nicam Sound to DAT Equipment

* TWO SOCKETS FOR EXTERNAL SPEAKER CONNECTION

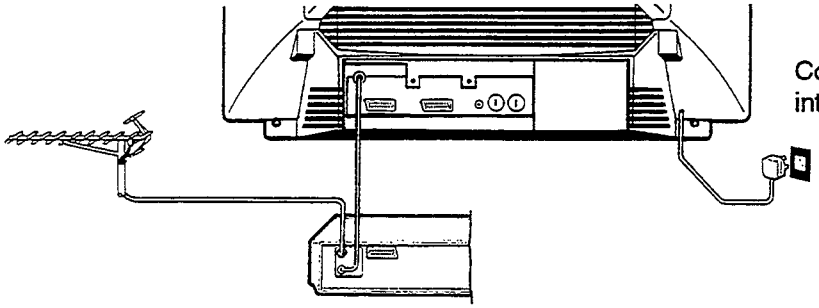
TV PREPARATION

Normal method of TV connection

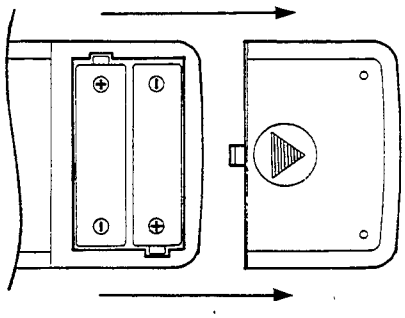


Connect your aerial to the socket on the rear of the TV as shown, then connect mains plug to supply.

TV connection via VCR



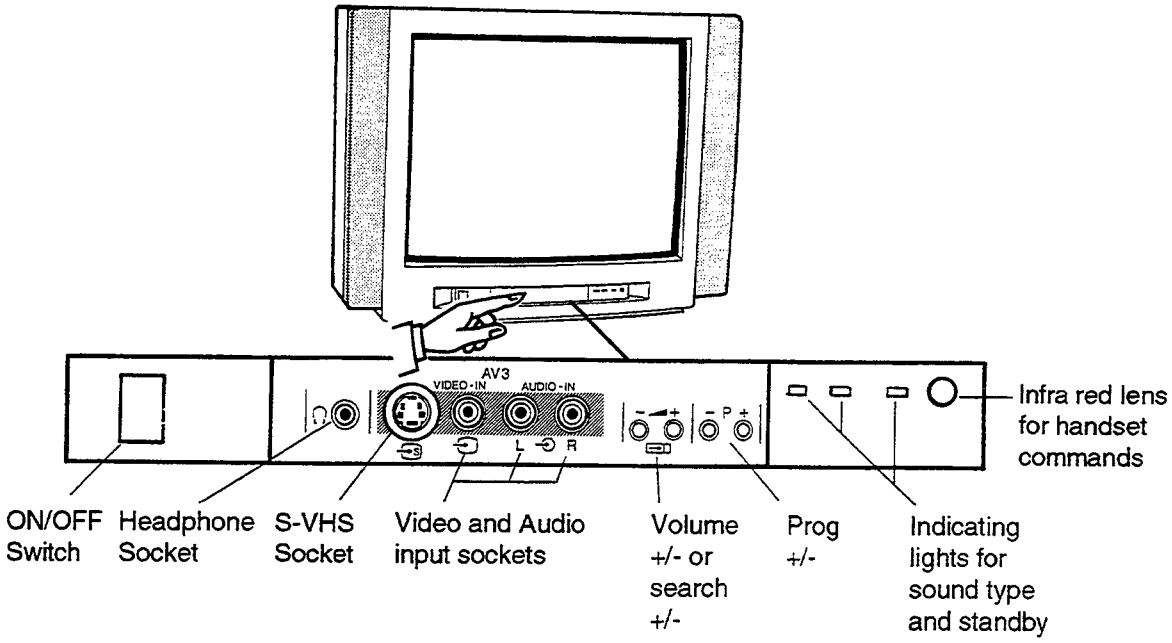
Connect aerial to VCR socket, then plug VCR cable into the TV socket. Connect mains plug to supply.

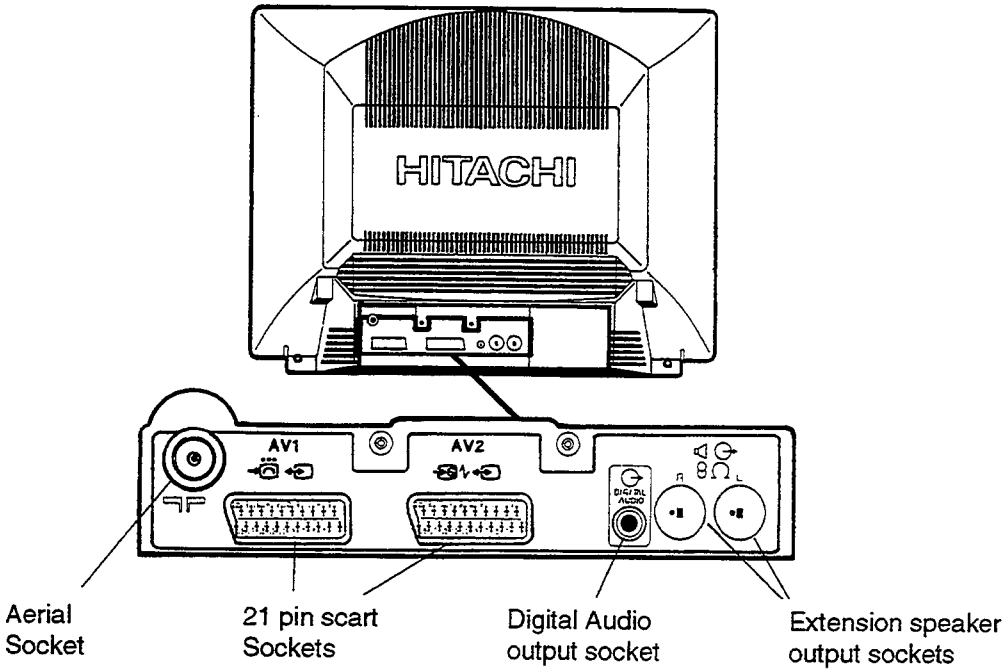


Remove battery cover from handset by pressing ▽, and sliding in direction of arrow. Insert the batteries supplied so that the ⊕ and ⊖ polarities match those indicated on handset.

CONTROLS AND CONNECTIONS OF TV

Push the door on the front of TV to reveal the sockets and controls.





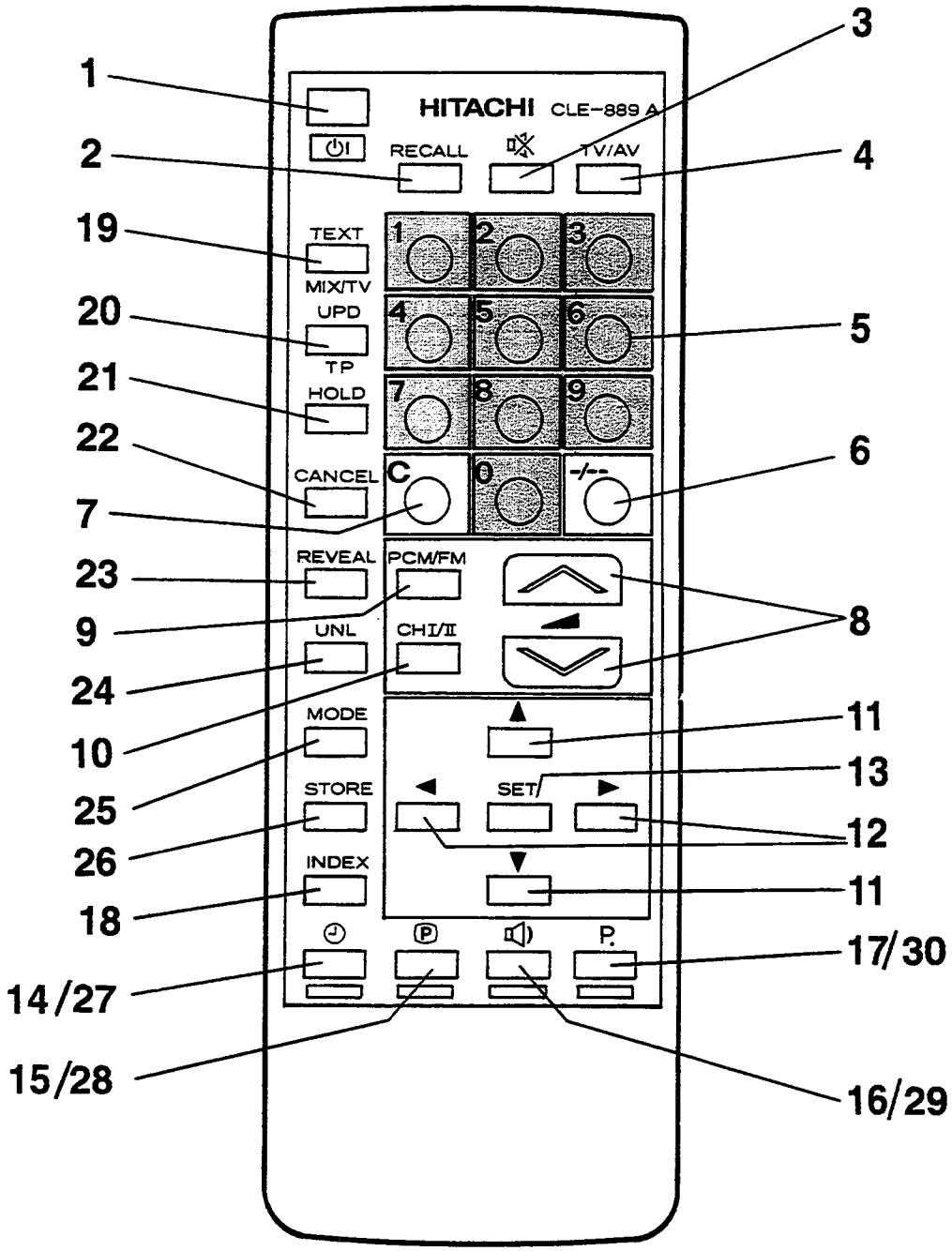
Switching On

Before switching on, ensure that the mains socket is in the "ON" position. Switch on your T.V. by pushing the ON/OFF switch to engage. To switch off, push ON/OFF once again.

Note: If the television fails to come on, but the red indication light on front of the T.V. is lit, then it is probably in standby mode. Should this happen, aim the remote control handset at the TV, and press the button marked ⏻| .

N.B. Normal operation from standby can also be resumed, by pressing the P + or - buttons on the front controls of this T.V.

REMOTE CONTROL HANDSET



FUNCTIONS OF HANDSET BUTTONS AT A GLANCE

TV BUTTONS

Button	Function	Purpose
1	Power ON/OFF ⏻ I	Switches TV picture and sound off. This is a standby condition only, and therefore the TV should be switched off using the ON/OFF switch if it is to be left for a long period of time.
2	Recall	When pressed displays programme number, sound type, and HELP menu status on-screen. Press once more to clear.
3	Mute	Turns sound off instantly when pressed. Press again to return sound.
4	TV/AV	Press this button to chose between external inputs i.e. VCR playback, or T.V. programmes.
5	Digits 0 - 9	Use these buttons to select programme numbers, select teletext pages, and to set time into/out of standby mode.
6	- / - -	Press this button to cause a single dash - or a double dash - - to appear on screen. When the single dash is displayed, programmes 0 - 9 can be selected using handset buttons 0 - 9, and when the double dash is displayed, programmes 10 - 59 can be selected.
7	C	Not used on this model
8		Press to increase or decrease volume level.
9	PCM/FM	Returns a NICAM broadcast to FM mono.
10	CH I/II	If a NICAM dual language broadcast is received, by pressing this button you can select the language required.
11	▲ ▼	These buttons cause programme numbers or teletext page numbers to rise or fall by one. Will also select top or bottom row of on-screen menu displays.
12	▶ ◀	Press to set on-screen menu levels and to start programme scanning facility.
13	SET	Stops programme scanning facility, and turns HELP menu ON/OFF etc.
14		Press this button to enter TIMER mode.
15		Displays the Picture set up mode. Adjustments to colour, contrast, and brightness etc can then be performed.
16		Displays the sound set up mode. Balance, bass, and treble levels etc. can then be adjusted.
17	P.	Displays the preset tuning mode. T.V programmes can then be tuned in.

TELETEXT BUTTONS

Button	Function	Purpose
18	INDEX	Pressing this button displays the index page of the magazine on display.
19	TEXT MIX/TV	This is a multi function button. First press will display Teletext mode. Second press will display Teletext and T.V picture together, and a third press will display T.V. picture only.
20	UPD/TP	In T.V. mode, press to display the time on-screen. In Teletext mode, allows selection of a particular sub-page number.
21	HOLD	Press to keep a Teletext page permanently on display. Press again to resume normal Teletext operation.
22	CANCEL	This button works in conjunction with the UPD/TP button when choosing a Teletext sub page number for display.
23	REVEAL	When a page having hidden information is displayed i.e. quiz pages, press this button to reveal answers.
24	UNL	First press will expand top half of page to double its size. Second press expands bottom half of page, and third press returns to normal display.
25	MODE	Press this button to alternate between normal teletext and favourite page mode.
26	STORE	Press to store a displayed page as a favourite page.
27	RED coded Button	Press to select red coloured topic at bottom of page. In favourite page mode, press to select or store favourite page in red box.
28	GREEN coded Button	Press to select green coloured topic at bottom of page. In favourite page mode, press to select or store favourite page in green box.
29	YELLOW coded Button	Press to select yellow coloured topic at bottom of page. In favourite page mode, press to select or store favourite page in yellow box.
30	BLUE coded Button	Press to select blue coloured topic at bottom of page. In favourite page mode, press to select or store favourite page in blue box.

ON SCREEN HELP MENU

Unless turned off, the HELP menu appears on most of the on-screen displays.

It appears as a block at the bottom of your T.V. screen as shown in example.

It consists of 4 coloured oblong blocks, 4 direction symbols, and the letter S. These represent all the handset buttons needed for on-screen menu adjustment, with S being the SET button.

When an on-screen menu is selected, one of the oblong blocks, and some of the symbols will flash. This indicates the handset buttons you need to press to select and adjust each function.

In the example shown, to move between the top and bottom row of displayed functions, press the direction buttons ▲ and ▼ To alter the level of each function, press the direction button ◀ to reduce the level or ▶ to increase the level.

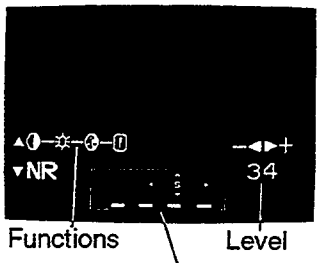
To move to the next function in each row, the HELP menu is prompting you to press the green colour coded button.

There will be some prompts on screen even when the HELP menu is turned off. In the example shown, alongside the functions in the display, are the direction symbols ▲ and ▼ . These prompt you to press those handset buttons to move between the top and bottom row of on-screen functions.

Above the displayed level, are the direction symbols ◀ and ▶ . Again, these are prompting you to press those buttons to alter each functions level.

Should you desire to turn off the HELP menu proceed as follows:

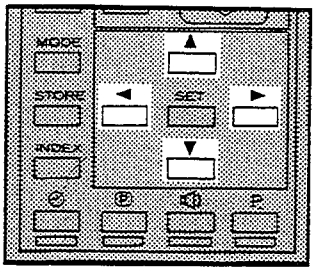
EXAMPLE

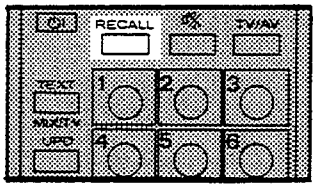


HELP MENU

Red Green Yellow Blue

Handset

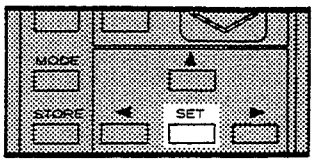




Press the RECALL button. The on-screen display shown will appear. Press SET button to turn off the HELP menu.

The ON indication will change to OFF.

Press RECALL button to clear display.



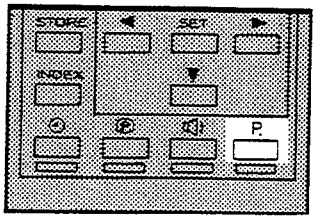
NOTE: If the HELP menu does not appear on-screen, even though the status is set to ON, then switch the T.V. off. After approximately 5 seconds, turn T.V. on again, press RECALL button, then SET button to set HELP status to ON.

Press RECALL button to clear display.

Programme Number

Sound type settings (may differ to this example)

HELP MENU Indication



Press **P.** button to select tuning mode display. The 4 symbols in the display represent the following tuning methods.

Fine Tune

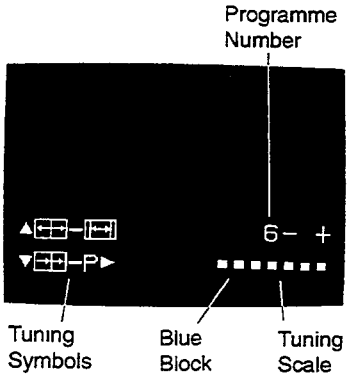
Automatic

All Channel Preset

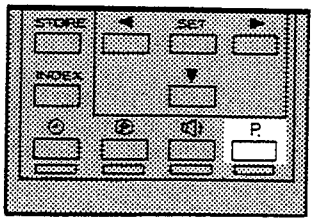
P ▶ Channel Selection

When the display is first selected, the Fine tune symbol will be blue.

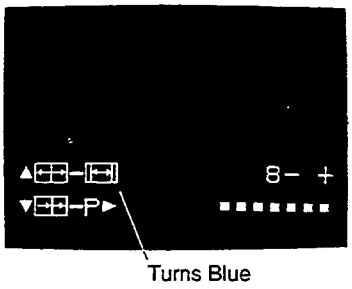
A tuning scale is also displayed, with the present tuning position shown by a blue block. This moves during tuning.

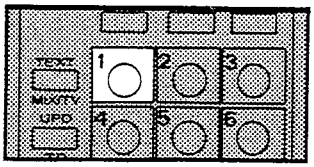


Automatic Tuning

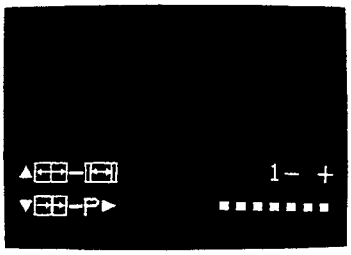


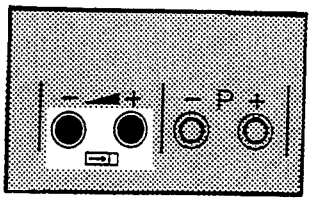
1. Press **P.** button once more. The Automatic search symbol will become blue.



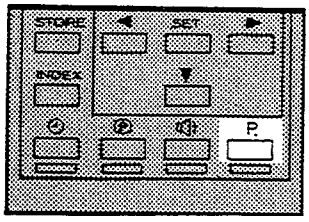


2. Select programme number, i.e. 1, using the handset digits.





3. Press the [→|] + or [→|] - button on the front control panel once only. The search routine will begin.

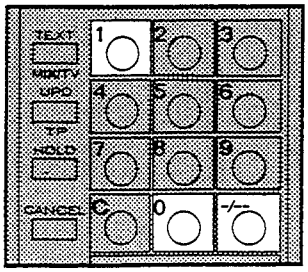


4 When a T.V. programme is located, the search routine will stop.

If the programme is not the one required, repeat step 3.

5. Once the required programme is obtained, repeat steps 2 - 4 until all the T.V. programmes in your area have been allocated a programme number.

6. Press **P.** button until on-screen display disappears.

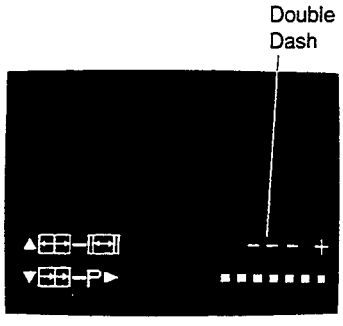


N.B. To select programme numbers 10 - 59, press the - / - - button until a double dash - - replaces the programme number in the display.

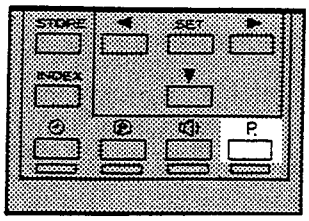
You can now enter programme numbers from 10 to 59.

In this mode, programme numbers 0 - 9 can still be selected by pressing a 0 (zero) first; i.e. to select programme number 1, press button 0 then 1.

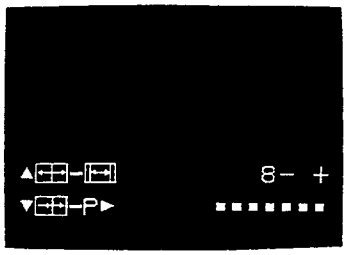
To return to single number entry, press - / - - button to obtain single dash in display.

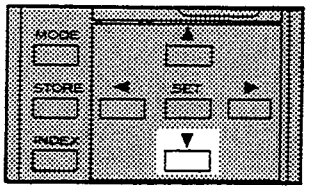


All Channel Preset Tuning

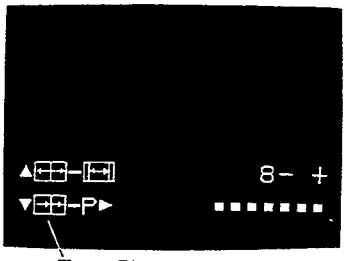


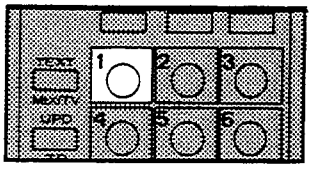
1. Press **P.** button to select tuning mode display.



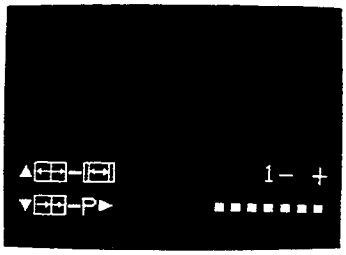


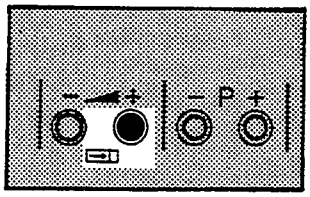
2. Press the down direction button ▼ . The All Channel Preset symbol will then become blue.



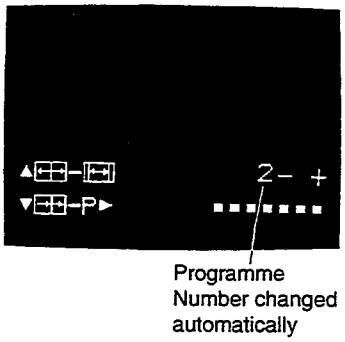


3. Select programme number, i.e. 1, using the handset digits.





4. Press the [→|] + button on the front control panel once only. The search routine will begin. When a T.V. station is found, the programme number in the display changes automatically, and the search routine continues. This process is repeated, until all the T.V. programmes in your area have been captured.

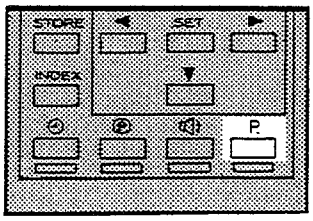


5. Press **P.** until on-screen display disappears.

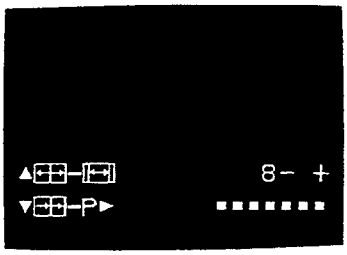
N.B. When using this tuning method, you cannot allocate a programme number of your choice to each T.V. programme.

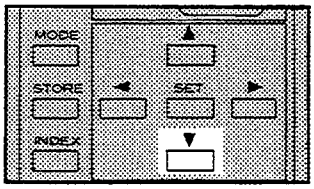
Channel Selection Tuning

This mode of tuning is similar to the "All Channel Preset" tuning, but allows you to allocate the programme number of your choice to each T.V. programme. This applies to programme numbers 0 - 9 only.

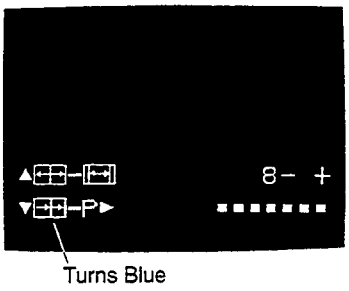


1 Press **P.** button to select tuning mode display.

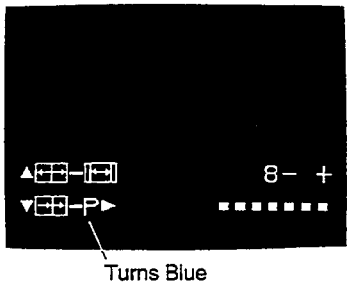


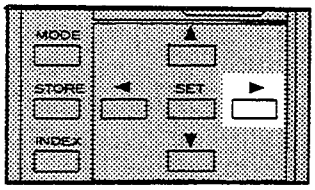


2. Press the down direction button ▼ . The All Channel Preset symbol will then become blue.



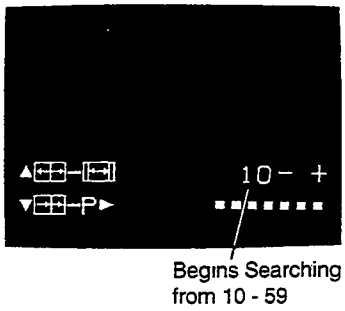
3. Press **P.** button again. The P ▶ symbol will turn blue.

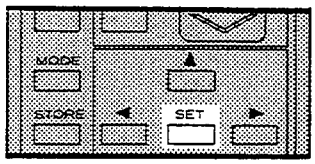




4. Press the right direction button ▶ to begin the search routine.

   The programme number will change to 10, and continues to rise to 59 whilst searching.

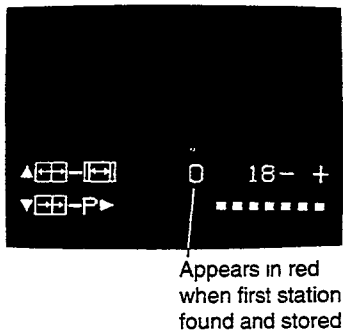


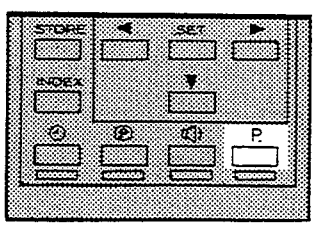


5. When a T.V. programme is obtained, the search routine will halt for approximately 3 seconds before resuming. When the first station you require is obtained, press the SET button. That programme will then be stored on programme number 0. To indicate this, a 0 appears briefly in red in the on-screen display. The search routine will then continue.

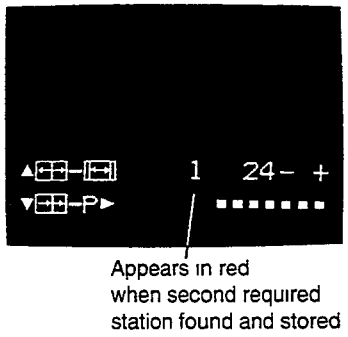
6. When the next programme you require is obtained, press SET button again. That programme is then stored on programme number 1.

   Repeat this procedure until all the T.V. stations in your area have been stored on the programme numbers of your choice.





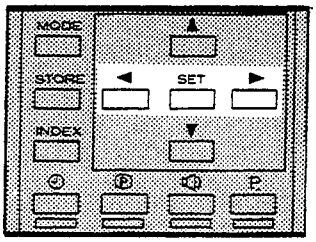
7. Press **P.** until the on-screen display disappears.



NOTE: The handset button marked C has no function on this model.

PROGRAMME SCANNING FACILITY

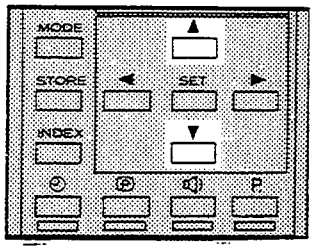
Once your T.V. has been tuned in, this facility enables you to step through each programme number to find your desired T.V. programme. This only applies whilst T.V. is in normal operating mode.



1. Press either the left ◀ or ▶ direction button.

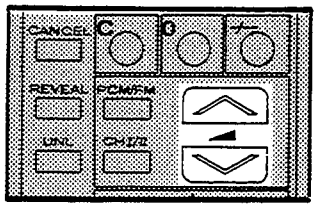
   The programme number will begin to rise or fall by one number at a time.

2. When your desired programme appears, press the SET button of handset to halt scanning.

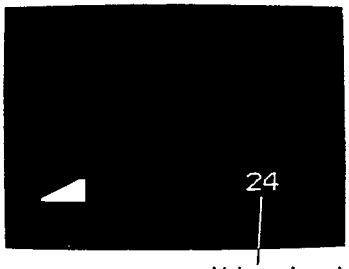


N.B. Pressing the up ▲ or down ▼ direction buttons will also cause the programme number to rise or fall by one. However, unlike the scanning facility, these buttons have to be pressed each time a change of programme number is required.

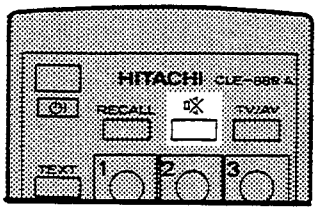
PRE-SETTING OF SOUND FUNCTIONS



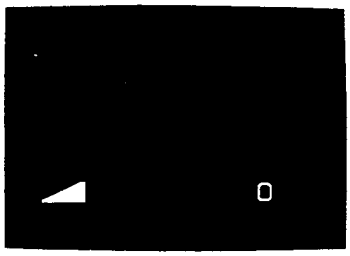
Press buttons on handset, or + or - buttons on the front controls, to increase or decrease volume. Minimum level = 0, maximum = 55.



Volume Level

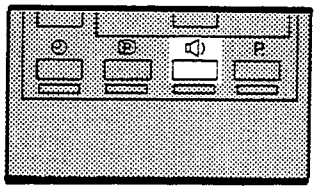


To mute the volume instantly, press button. The display will be as shown. To return sound, press once more.



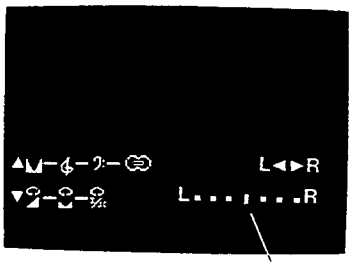
Symbol and level will be red

Sound Functions:

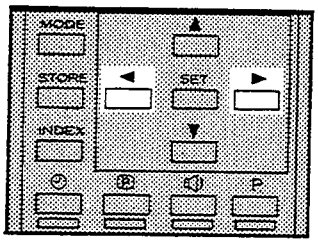


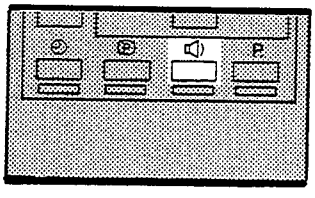
1. Press to obtain the sound display. The balance symbol will be yellow.

2. Press the right ▶ or left ◀ direction buttons to obtain the desired speaker balance. Ideally, this should be when the yellow bar of adjustment scale is in the central position.



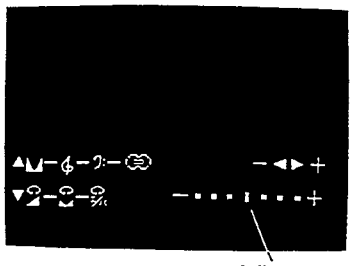
Yellow Bar



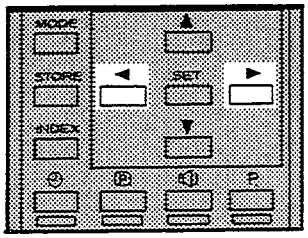


3. Each press of the button will cause the next function in the top line of display to become yellow. Adjust the level of each function using the right ▶ or left ◀ direction buttons.

   The adjustment scale for treble and bass will be as shown.



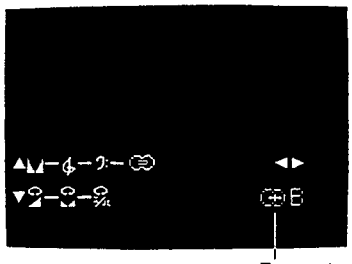
Adjustment Scale



4. When the sound effects mode is chosen, a symbol will replace the on-screen adjustment display. This symbol indicates the type of sound effect presently in operation.

   There are 5 different sound effects. Press the right ▶ or left ◀ direction buttons to obtain the sound effect you desire.

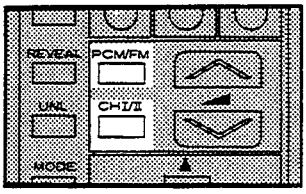
   The table below shows the symbols displayed, and explains the effect each produces.



Symbol	*Sound Effect*
A	Enhances the sound to produce a greater feeling of acoustic presence.
B	Improves the above effect.
	Normal stereo.
	Changes stereo sound broadcast to mono.
	Produces a pseudo stereo effect from a mono broadcast.

NOTE: If a non-Stereo broadcast is being received, not all the above symbols will appear in display.

Additional Sound Features

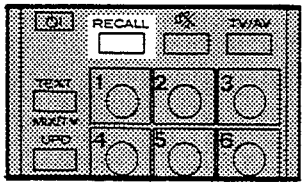


When receiving a Nicam stereo broadcast, pressing the PCM/FM button will return you to FM mono.

It is also possible to receive dual language programmes via the NICAM sound system, should they be broadcast sometime in the future.
Select the required language by pressing the CHI/II button.

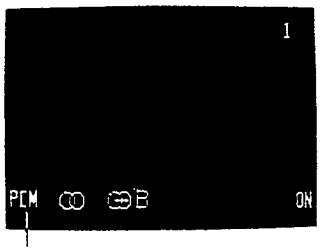
The two green indication lights on the front control panel of the T.V., will light up as follows to indicate the above sound features.

☀	☀	Stereo broadcast received
☀	■	Main language of a dual sound broadcast
■	☀	Second language of a dual sound broadcast
■	■	Mono broadcast



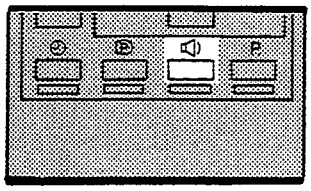
N.B. When the PCM/FM button has been pressed to obtain FM Mono from Nicam, the two green indication lights will still remain on.

To confirm the present sound status, press the RECALL handset button. The on-screen display will contain FM if in Mono mode, or PCM if in Nicam stereo mode.

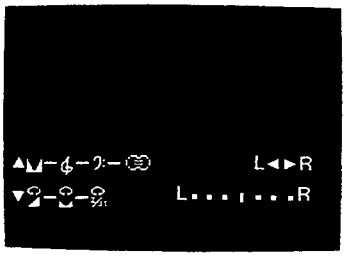


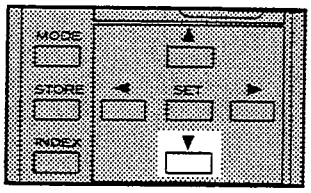
HEADPHONE ADJUSTMENTS

This T.V. also allows you to perform individual adjustments to the sound output to your headphones. Plug headphones into the front control socket marked and proceed as follows.

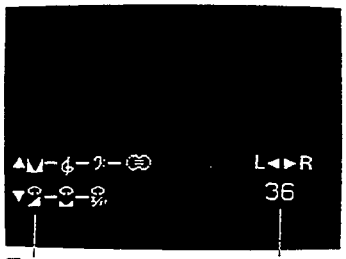


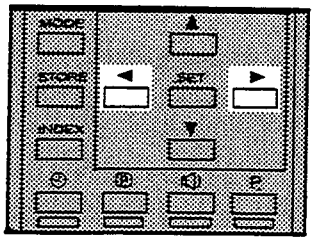
1. Press the button to obtain the sound display.





2. Press down direction key ▼ . The symbol will turn yellow, and the present headphone volume level is displayed.

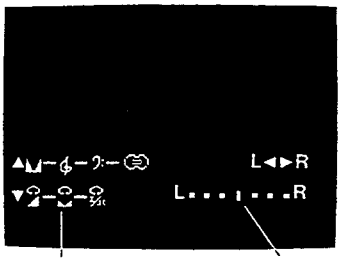


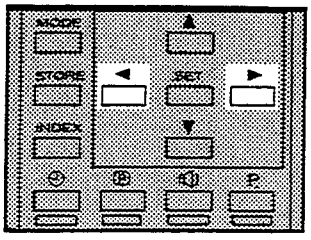


3. Press left ◀ or right ▶ direction buttons to increase or decrease volume.

   Minimum level = 0, maximum level = 36.

4. Press button once more. The symbol will turn yellow.

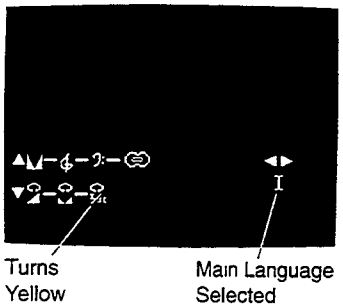




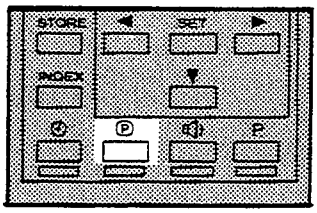
5. Press left ◀ or right ▶ direction buttons to adjust headphone balance.

6. Press button again. I-II symbol becomes yellow. Should a Nicam dual language transmission be broadcast, you can select the language required by pressing the left ◀ or right ▶ direction buttons.

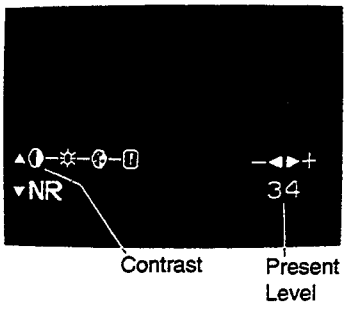
   When I is displayed, the main language is output to the headphones, and when II is displayed, the second language will be output.

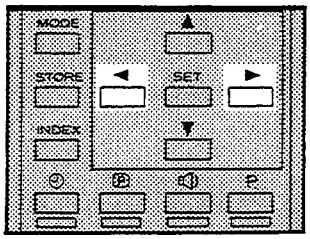


PRE-SETTING OF PICTURE LEVELS



1. Press (P) button to obtain the display shown. The contrast symbol will be coloured green.

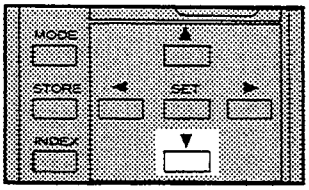




2. Press the left ◄ or right ► direction buttons until desired level of contrast is obtained.

3. Keep pressing (P) button to cause brightness ☼ , colour ◔ , and sharpness ◨ symbols to become green in turn.

4. Adjust each level whilst its symbol is green, using the left ◄ or right ► direction buttons.

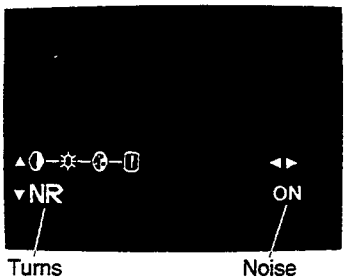


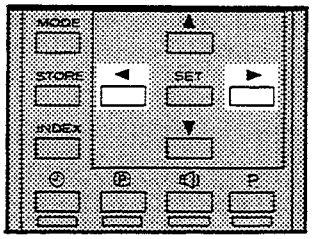
5 After adjusting sharpness, press the down direction button ▼ .

The NR of display becomes green.

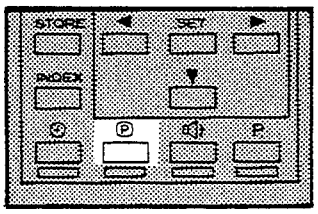
This represents the Noise Reduction facility.

N.B. This Noise Reduction facility can help to improve picture quality in some poor signal conditions.





6. Press left ◄ or right ► direction buttons to turn this function ON or OFF for best overall picture.



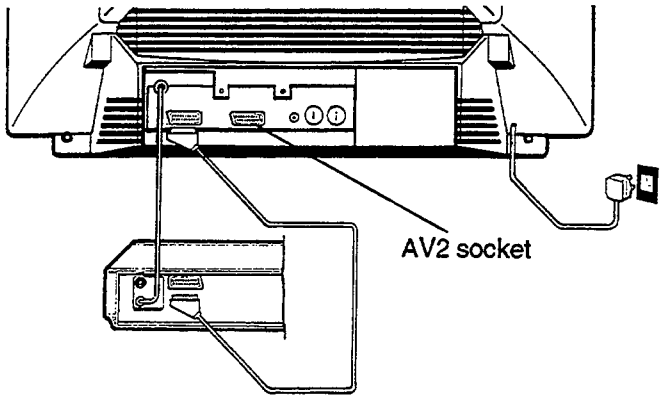
7. Press (P) button once more to clear display from screen.

N.B. The contrast, brightness, and colour levels range from 0 - 63, whilst the sharpness range is -3 to 3.

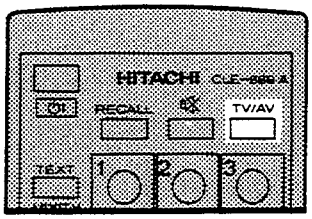
CONNECTING EXTERNAL AUDIO/VIDEO EQUIPMENT

If your equipment has a 21 pin scart socket identical to the type used on this T.V., then to replace the T.V. signal with the external signals, simply connect to the AV1 socket on the rear of T.V. using a 21 pin scart plug lead, and switch on.

N.B. If you wish to input signals via the AV2 socket, you must select AV2 using the TV/AV button of remote control (see following procedure).



If the connecting socket of your equipment is not compatible to the T.V. 21 pin socket, please consult your dealer to obtain a suitable connecting lead, then proceed as follows.



1. Connect your equipment via the special lead, to the desired 21 pin connector of T.V. (refer to displays and instructions in step 2).

2. Press the TV/AV button to obtain one of the following displays on your T.V. screen. The T.V. signal will disappear.

First press

Select this display to view inputs from VCRs or RGB equipment (i.e. personal computers) fed via the AV1 socket.

Second press

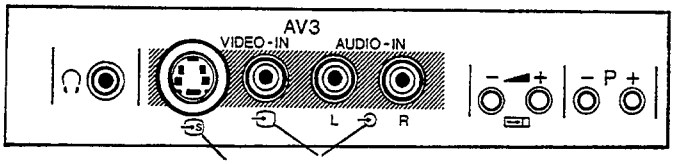
Select this display to view VCR inputs fed via the AV2 socket.

Third press

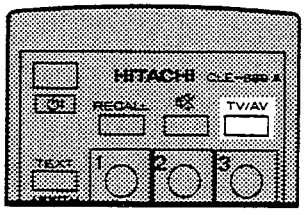
Select this display to view S-VHS inputs fed via the AV2 socket.

Outputs from VHS and S-VHS camcorders, can also be input via sockets on the front of the T.V Push front control door to gain access to these.

Front sockets



Camcorder inputs



To view camcorder inputs fed via the front sockets, first press the TV/AV button until the display 3 appears on screen.

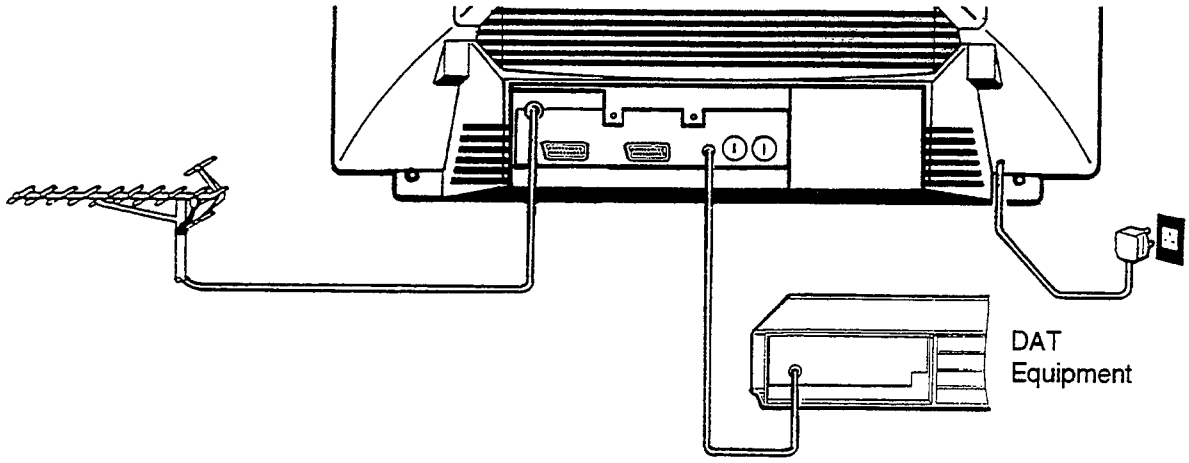
To view S-VHS inputs fed via the front socket, press the TV/AV button until the display 3S appears, on screen.

This display cannot be selected until S-VHS / Hi 8 (8mm) equipment is connected.

NOTE: No matter which of the AV modes have been selected, signals input via the AV1 socket will always maintain priority.

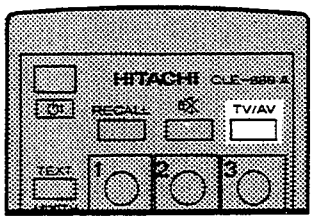
DIGITAL AUDIO SOCKET

When receiving a NICAM broadcast, you can use the Digital Audio socket on the rear of T.V. to output the signal to DAT equipment for recording or playback.

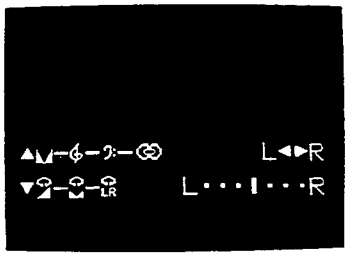


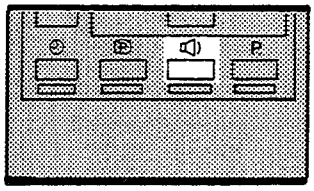
MONO VCR INPUTS VIA THE PHONO SOCKETS

When connecting Mono VCRs via the phono sockets on the front of this T.V., you can set the headphone output to suit Mono reception.

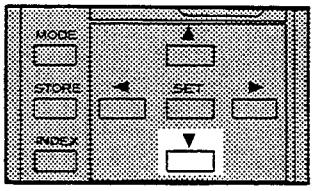


1. Press TV/AV button.



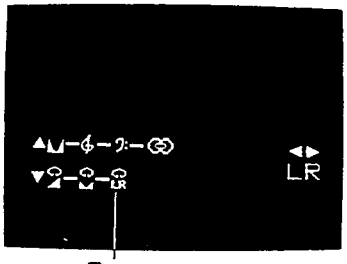


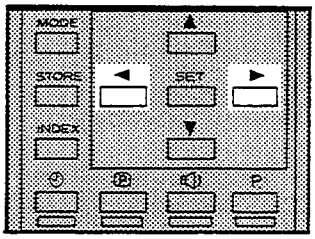
2. Press 🔊 to obtain the sound display.



3. Press the down direction button ▼
   The 🎧 symbol will turn yellow.

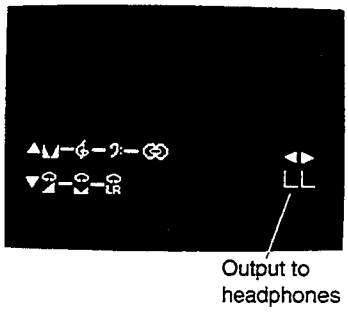
4. Press 🔊 until $\overset{🎧}{LR}$ symbol becomes yellow.



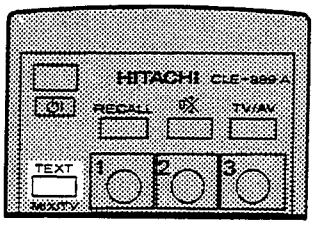


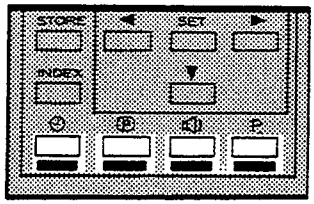
5. Press the left ◄ or right ► direction buttons until the output to the headphones is displayed as LL.

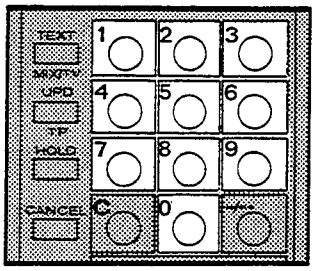
   This ensures that the Mono sound is output to the left and right hand speaker of headphones.

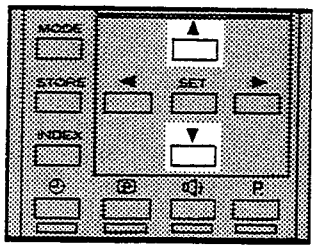


TELETEXT OPERATION









To enter Teletext mode, press the TEXT button.

At the top of displayed page will be the page header. It consists of the teletext page number on display, and the date and time.

At the bottom of the page will be 4 coloured topics. These topics are transmitted by the broadcasting authorities.

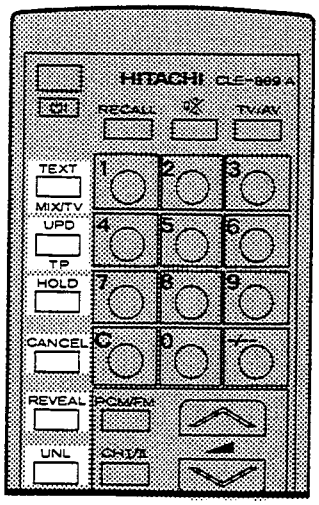
To select one of these topics for viewing, press the corresponding colour coded button on handset.

Once that page is displayed, 4 new topics appear at the bottom of the page. You can keep selecting from these topics as long as desired.

If you do not wish to view any of the topics displayed, enter your own 3 digit page number using the buttons 0 - 9. If you make an error entering page number, complete 3 digit number, then re-enter the correct number.

Pressing the up direction button ▲ , or the down direction button ▼ , causes the page number on display to go up by 1, or down by 1.

Teletext Facilities



TEXT/MIX/TV Button (Multi-function).

Press once to enter Teletext mode. Press again to superimpose Teletext onto T.V. picture, and press a third time to return to T.V. operation.

HOLD Button.

If the page on display consists of more than one page of information, then press this button to keep the present page on display from changing.

Press once more to release the hold condition.

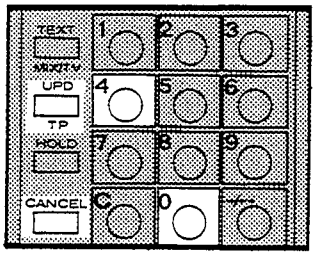
REVEAL Button.

Some Teletext pages contain hidden information, i.e. quiz pages for example. Press this button to reveal.

UNL Button.

First press expands upper half of page on display. Second press expands bottom half, and a third press returns Text to normal size.

UPD/TP Button.



Pressing this button whilst in normal T.V. operation will display the time on the screen.

In Teletext mode, this button allows you to select a certain sub-page for viewing, (i.e. page 4 of a 6 page display). You can do this as follows:-

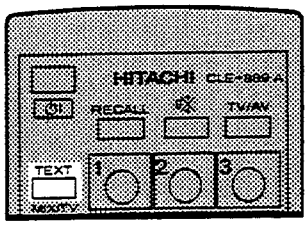
Press UPD/TP button. The page number in left hand corner of header is replaced by the sub page number on view, i.e. it will be 0002 if page 2 of the 6 page display is on view.

Using the handset digits enter 0004 for sub-page 4.

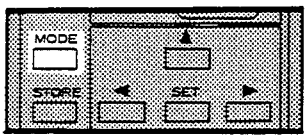
Press CANCEL to return T.V. picture. The Teletext header will remain, and the magazine type, page number and date etc. will be green. The page number in header will keep rolling until sub-page 4 is found. When this happens the header reverts to white. Press CANCEL to view sub-page 4.

Favourite Page Mode

This T.V. allows you to store up to 4 pages for instant recall. These pages can be the ones you most frequently use, and are thus known as favourite pages. This can only be done on programme numbers 1 - 8 in the following manner.



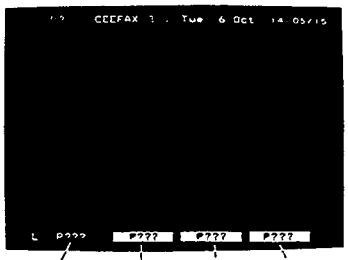
1. Press TEXT button.

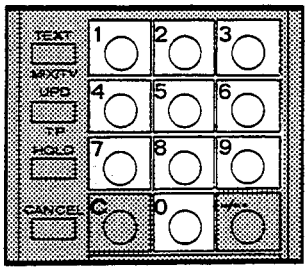


2. Press MODE button.

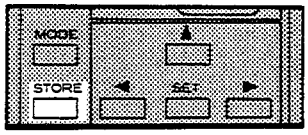
   The 4 coloured topics at the bottom of the displayed page are replaced by coloured boxes, each containing 3 question marks. When this mode is first selected, there will be no red box, but the question marks will be coloured red.

   The question marks may be replaced by page numbers, if they have been previously stored. If so, the page number in the red box will be displayed when favourite mode is first selected.



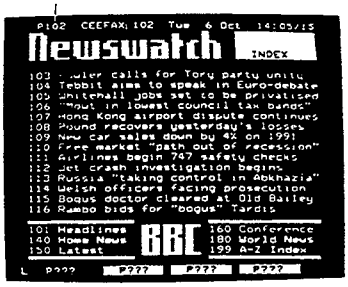


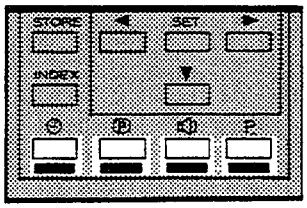
3. Enter the 3 digit number of a page you view most regularly, i.e. page 102.



4. Once displayed, press STORE button. All coloured boxes will flash.

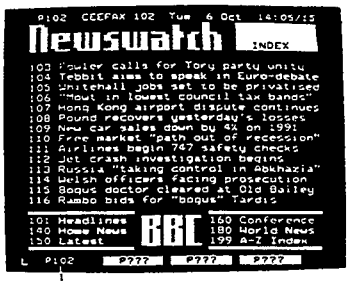
Page Entered





5. Press a coloured button e.g. red. The flashing stops, and the page number appears in the red box position.

6. Using digits 0 - 9, enter your next favourite page number i.e. page 200.

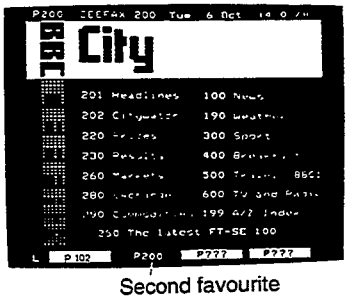


First favourite page stored

7. Once page is displayed, press STORE button, then a colour coded button, e.g. green.

   That favourite page number will now appear in the green box position.

8. Repeat steps 6 - 7 until all coloured boxes have been allocated page numbers.



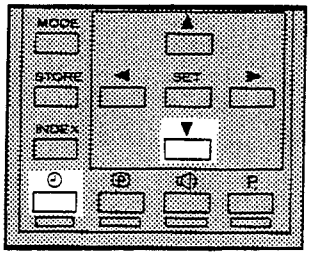
Second favourite page stored

9. To view one of these favourite pages, simply press the corresponding colour coded button.

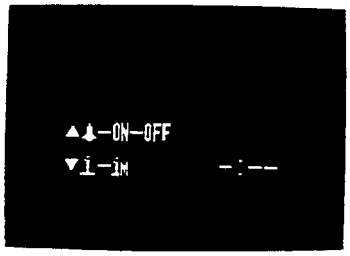
10. To return to normal Teletext press MODE button.

Information Mode

Use this facility to leave a message that can be displayed on screen at any time.

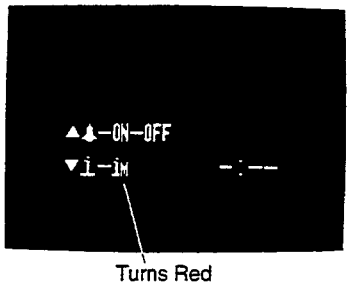


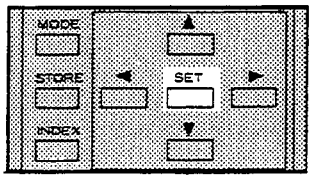
1. Press ⏲ button to obtain the display shown.



2. Press the down direction button ▼ . The i in display becomes red.

3. Press ⏲ button so **iM** of display becomes red.

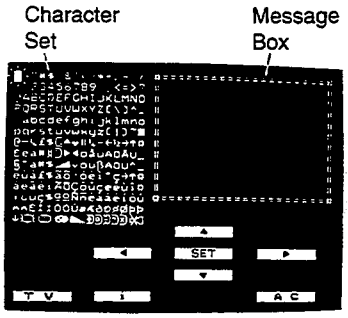


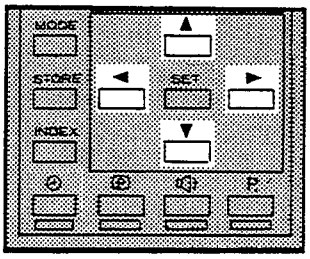


4. Press SET button. The T.V. picture will be replaced by the message display screen. This display consists of a character set, and a message box.

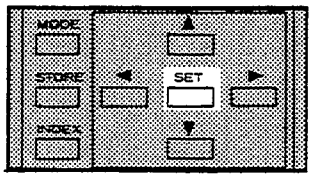
   The handset buttons required to operate this function are also highlighted underneath the message box.

   The character set consists of letters, numbers and symbols etc.

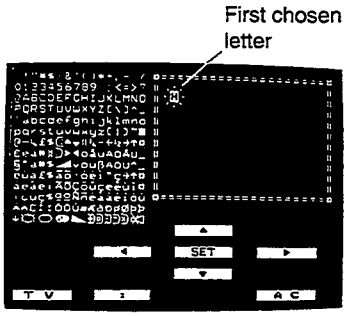


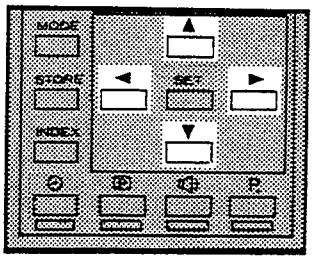


5. Using the left ◀ , up ▲ , right ▶ , and down ▼ direction buttons, move the flashing block which acts as a cursor to highlight your first desired letter.

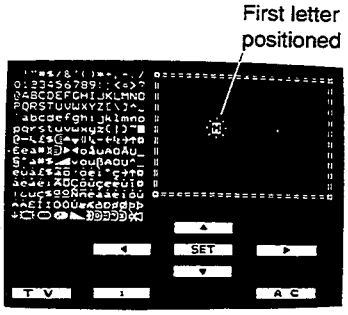


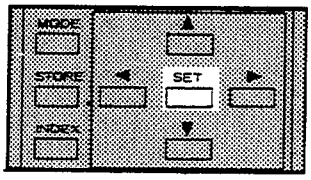
6. Press SET button. Your chosen letter then appears in the top left hand corner of message box.





7. Use the direction buttons ◀ , ▲ , ▶ , and ▼ , to position the first letter in the message box.



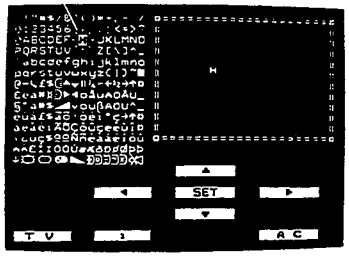


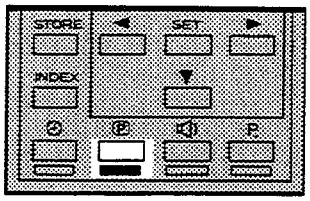
8. Press SET button. Flashing block returns to character set.

9. Repeat steps 5 - 8 until message is completed.

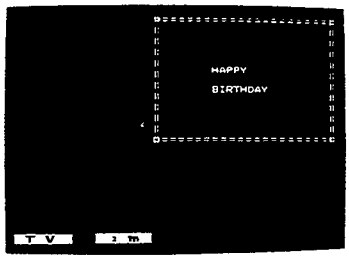
N.B. Every time you wish to begin a new line, position the first letter by using the direction buttons ◀ , ▲ , ▶ , and ▼ .

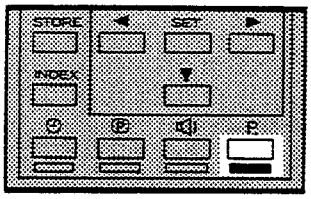
Flashing Block





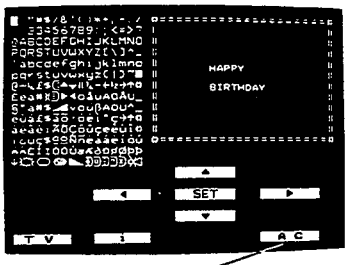
10. Press the green coded handset button to select the i function of display. This displays the message box only, with the letters TV and **im** colour coded underneath. The message you entered will be contained in this box.





11. To create a new message, press the green coded handset button to select the **im** function. This returns the message display to the screen.

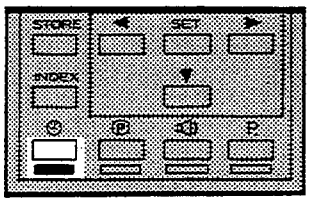
12. Press the blue coded handset button to select the AC function. This clears the existing message.



Select AC function to clear message

13. Repeat steps 5 - 8 to create new message, then press green coded button to return message box display.

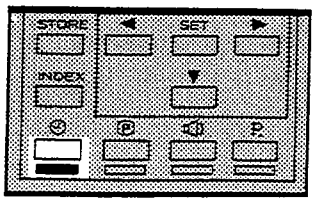
Select TV function to remove display from screen



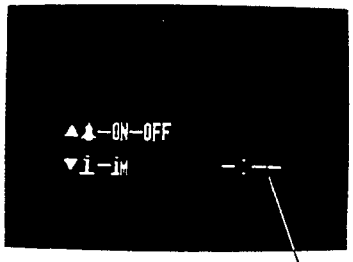
14. When desired, press red coded button to return to normal T.V. operation.

15. To view a message whilst in normal T.V. operation, simple perform steps 1 and 2 then press SET button.

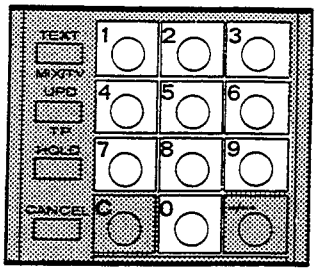
Alarm Timer:



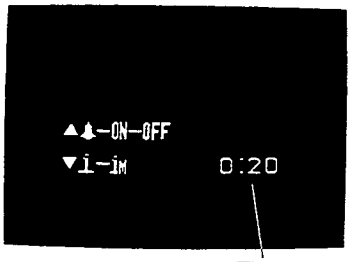
1. Press ⏲ button. The On-screen display shown will appear. The 🔔 symbol will be red.



2. Decide the amount of time you wish to elapse before the alarm sounds. This can be from 1 minute to a maximum of 2 Hrs 59 mins.



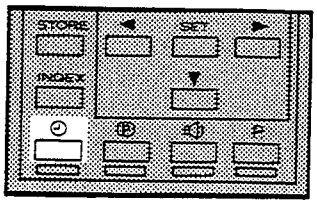
3. Using handset digits 0 - 9, enter the desired time. Times of less than 1 hour should be preceded by a (zero); i.e. for 20 minutes, press 0, 2, then 0.



4. Press ⏲ button until all displays disappear from screen. When entered time has elapsed, the on-screen display will be as shown, and 4 beeps will be heard. This is repeated twice more before the display disappears.

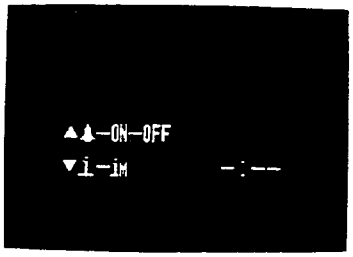
Alarm Display

ON Timer:

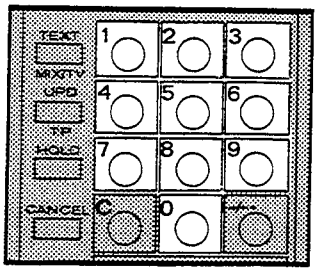


This function enables you to programme the T.V. to return to normal operation from its standby mode.

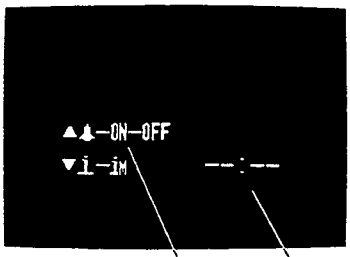
In standby mode, the picture and sound will disappear, but the T.V. is not switched off.



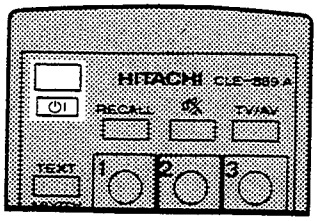
1. Press ⏲ button. The On-screen display shown will appear. The 🔔 symbol will be red.



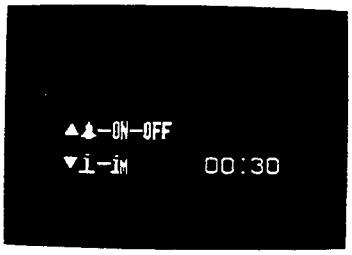
2. Press ⏲ again. The ON in the display becomes red, and there will be 4 red dashes.



3. Decide the amount of time you wish the T.V. to remain in standby. This can be from 1 minute to a maximum of 23 Hrs 59 mins. When entering times of less that 1 hour enter two zeros first; i.e. for 30 minutes, press 0, 0, 3, then 0.

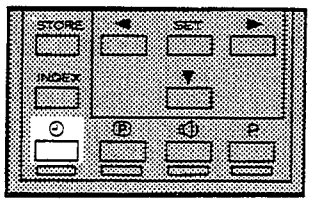


4. Press ⏻I button once to place the T.V. into standby. The red indicator light on the front of the T.V. will flash periodically.



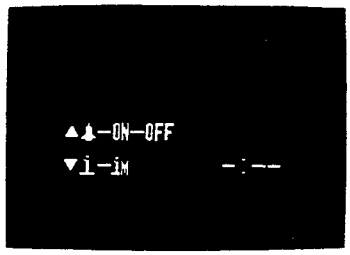
5. When the entered time has elapsed, the T.V. returns to normal operation.

OFF Timer:

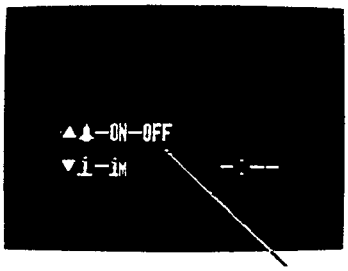


Use this facility to programme your T.V. to go into standby at a pre-determined time.

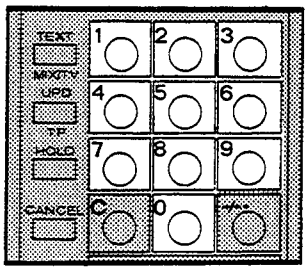
1. Press ⏲ button. The On-screen display shown will appear. The 🔔 symbol will be red.



2. Press ⏲ button twice. The OFF will become red.

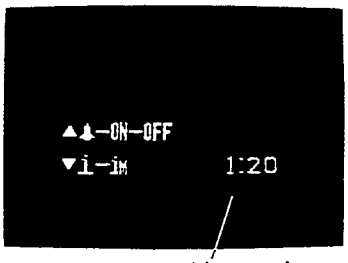


EXAMPLE Red

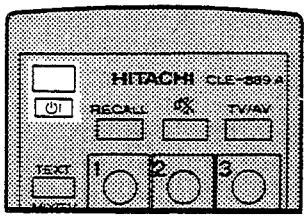


3. Decide the amount of time to elapse before T.V. goes into standby. This can be from 1 minute to 2 Hrs 59 mins.

4. Enter the calculated time using handset buttons 0 - 9.



1 hour and
20 mins entered



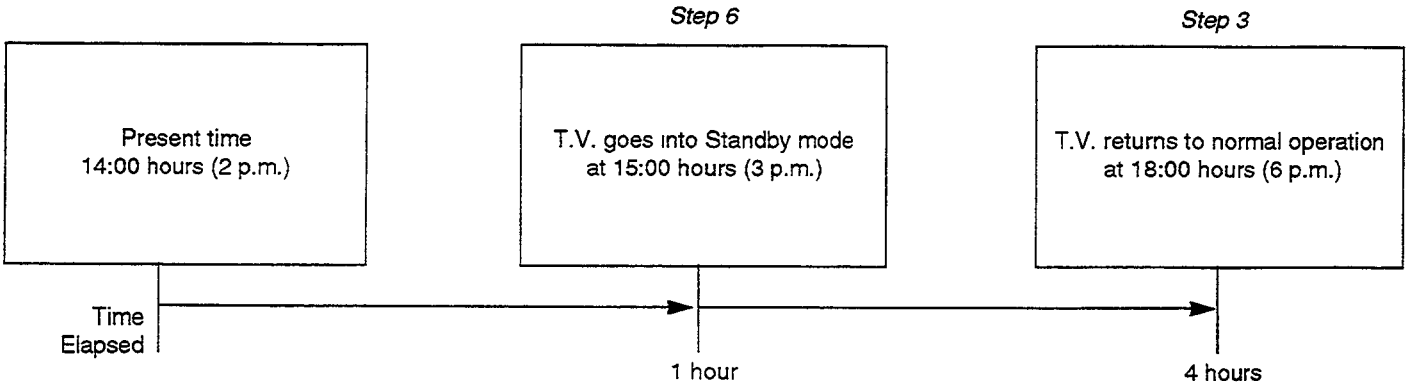
5. Press ⏲ button once to remove on-screen display. When entered time has elapsed, the on-screen display shown appears for a short time, then the T.V. will go into standby.

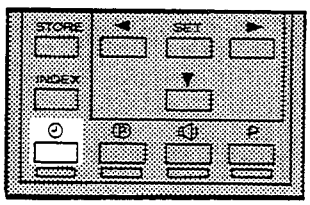
6. To return T.V. to normal operation, press ⏻ I button once.

To combine On and OFF Timer

It is also possible to combine the ON and OFF features, should you wish to programme the T.V. to go into standby mode, then return to normal operation at pre-determined times.

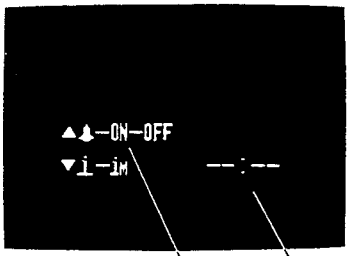
N.B. When entering the timer settings for this combined timer function, it is important that they are calculated from whatever the present time is. The following diagram shows how this relates to steps 6 and 3 in the procedure.





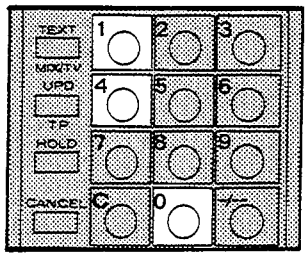
1. Press ⏲ button to obtain timer display.

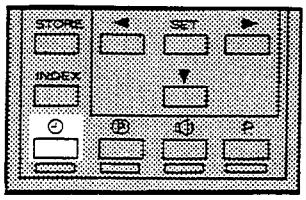
2. Press ⏲ again so ON becomes red.



Turns Red

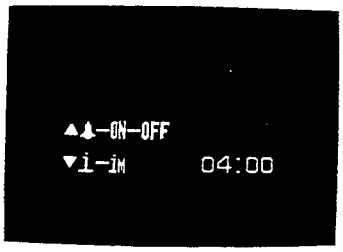
4 Red Dashes



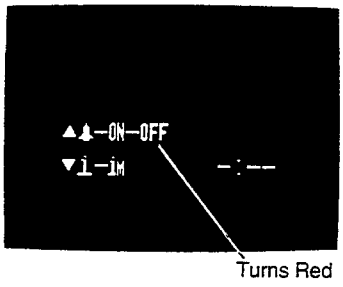


3. Calculate the time to elapse before T.V. comes out of standby. This must be done from the present time. As an example, if it is now 14:00 Hrs (2pm), and you wish the T.V. to return to normal operation at 18:00 Hrs (6pm), then the total time = 4 Hrs.

4. Enter 0, 4, 0, 0 using handset buttons.

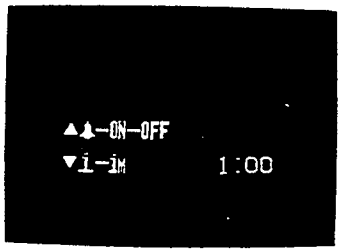


5. Press ⏲ once more. OFF in display becomes red.



6. Using the same starting point, i.e. 14:00 Hrs (2pm), calculate the time before standby is required. For the T.V. to enter standby at 15:00 Hrs for example, this will be 1 hour.

7. Enter 1, 0 and 0 using handset buttons.

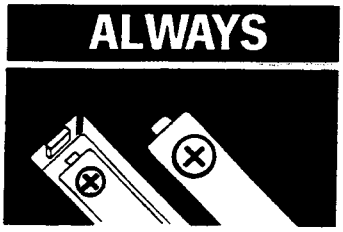


8. Press ⏲ to clear display from screen.

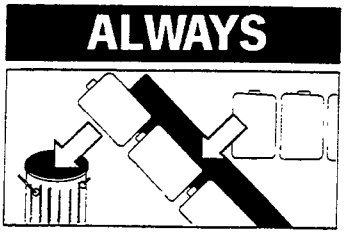
The T.V. will then go into standby at 15:00 Hrs (3pm), and return to normal operation at 18:00 Hrs (6pm).

BATTERY SAFETY GUIDELINES

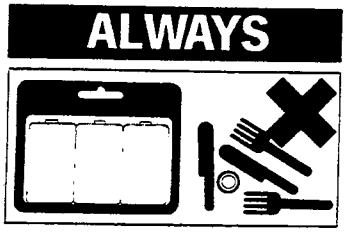
Used correctly, domestic batteries are a safe and dependable source of portable power. Problems can occur if they are misused or abused - resulting in leakage or, in extreme cases, fire or explosion. Here are some simple guidelines to safe battery use designed to eliminate any such problems.



Take care to fit your batteries correctly, observing the plus + and minus - marks on the battery and appliance. Incorrect fitting can cause leakage or, in extreme cases, fire or explosion.

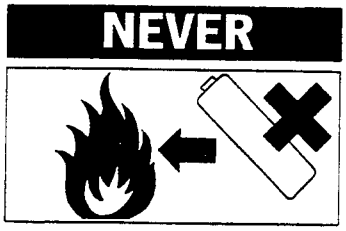


Replace the whole set of batteries at one time, taking care not to mix old and new batteries of different types, since this can result in leakage or, in extreme cases, fire or even an explosion.

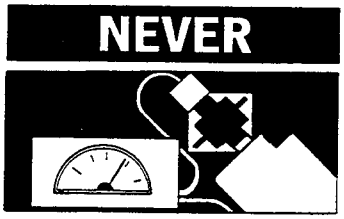


Store unused batteries in their packaging and away from metal objects which may cause a short circuit resulting in leakage or, in extreme cases, fire or even an explosion.

Remove dead batteries from equipment and all batteries from equipment you know you are not going to use for a long period of time. Otherwise the batteries may leak and cause damage.



Never dispose of batteries in fire as this can cause them to explode. Please put dead batteries in with the normal household waste.



Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. There are special rechargeable batteries which are clearly marked as such.

SOME USEFUL HINTS ON EQUIPMENT CARE

1. Avoid places where dust is a problem, and do not place your receiver near radiators or other heat sources, as overheating could lead to faulty performance. Also, try to place your receiver where no light (artificial or sunlight) shines on the screen as this affects picture quality and could prevent the receiver from responding to commands from the remote control handset.

2. Keep all magnetic material away from the face of the TV tube, as magnetic fields may cause undesirable effects on the picture.

3. Never use thinners or chemical solvents to clean your cabinet.

4. Occasionally, you may receive a mild electric shock from the picture tube. This is only the same type of static electricity you sometimes experience when taking off items of clothing.

5. Avoid knocking or dropping the remote control unit to the floor, as this could damage precision parts assembled in this unit.

6. When batteries are exhausted, the remote control unit does not work, or the operation becomes unstable - replace the old batteries.

7. When TV games, home computers etc. are used in conjunction with the receiver, avoid using excessive contrast and brightness, as this may damage the phosphor coating of the picture tube.

SOME DO'S AND DON'TS

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

◆◆◆◆◆◆◆◆

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

◆◆◆◆◆◆◆◆

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way - switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family know how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

DON'T use makeshift stands and NEVER fix legs with wood screws - to ensure complete safety always fix the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

- NEVER let anyone especially children push anything into holes, slots or any other opening in the case - this could result in a fatal electric shock;

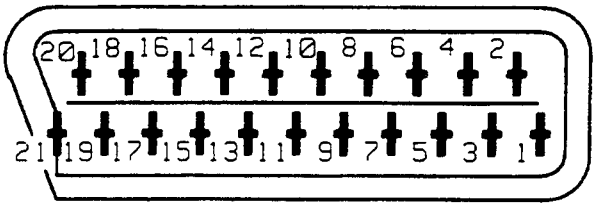
- NEVER guess or take chances with electrical equipment of any kind - it is better to be safe than sorry!

◆◆◆◆◆◆◆◆

SPECIFICATIONS

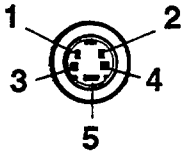
T.V. Standard	625 line single standard
Channel Coverage	UHF channels 21 - 68
Programme Selectors	10 key buttons on remote control handset and UP/DOWN buttons on front control
Aerial Impedance	75 Ohm unbalanced
Picture Tube	51 cm type
Mains Voltage	240V AC 50 Hz
Power Consumption	107 Watts
Speakers	6 x 13 cm
Weight	23 Kg approx.
Dimensions (W x H x D)	612 x 465 x 484 cm
Remote Control Batteries	2 x HITACHI SUM-3 or equivalent "AA" type

21 PIN SCART SOCKET



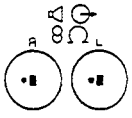
PIN No.	FUNCTION	PIN No.	FUNCTION
1	AUDIO OUT (RIGHT)	11	GREEN VIDEO INPUT
2	AUDIO INPUT (RIGHT)	12	NOT USED
3	AUDIO OUT (LEFT)	13	GROUND
4	GROUND (AUDIO)	14	NOT USED
5	GROUND	15	RED VIDEO INPUT
6	AUDIO INPUT (LEFT)	16	STATUS (BLANKING) INPUT
7	BLUE VIDEO INPUT	17	GROUND
8	SWITCHING INPUT	18	GROUND
9	GROUND	19	COMPOSITE VIDEO OUTPUT
10	NOT USED	20	COMPOSITE VIDEO INPUT
		21	GROUND

S-VHS SOCKET



PIN No.	FUNCTION
1	CHROMINANCE INPUT
2	LUMINANCE INPUT
3	CHROMINANCE GROUND
4	LUMINANCE GROUND
5	FRAME GROUND

EXTENSION SPEAKER SOCKETS



When connecting external speakers to these sockets, ensure they are of at least 8 ohms impedance, with a wattage rating of 7.5W R.M.S.

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